UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/266,680	03/11/1999	JEFF YOUNG	07844/292001	6131

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FISH & RICHARDSON P.C.
500 ARGUELLO STREET
SUITE 500
REDWOOD CITY, CA 94063

EXAMINER
BASHORE, WILLIAM L

ART UNIT	PAPER NUMBER
2176	

DATE MAILED: 09/02/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.	**Applicant(s)**
Office Action Summary	09/266,680	YOUNG ET AL.
	Examiner	**Art Unit**
	William L. Bashore	2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 June 2003* .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-18, 20-30 and 32-40* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14-18, 20-30, 32-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)		4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)		5)☐ Notice of Informal Patent Application (PTO-152)
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .		6)☐ Other: .

DETAILED ACTION

1.   This action is responsive to communication: RCE filed 6/13/2003, to the original application filed

3/11/1999. IDS filed 12/3/2001 (paper 2), and 4/11/2002 (paper 3).

2.   The objection to the claims regarding improper dependent form has been withdrawn as necessitated by

amendment.

3.   Claims 14-36 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Motoyama, and

Takasawa.

5.   Claims 14-18, 20-30, 32-36 are pending. Claims 19, 31 have been canceled. Claims 37-40 have been

added. Claims 14, 22, 25, 28, 34 are independent claims.

Continued Examination Under 37 CFR 1.114

6.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e),

was filed in this application after final rejection. Since this application is eligible for continued examination

under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous

Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/13/2003 has

been entered.

Claim Rejections - 35 USC § 103

7.   **The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness**

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102
> of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the
> art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was
> made.

8.   Claims 14-18, 20-30, 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Motoyama et al. (hereinafter Motoyama), U.S. Patent No. 6,009,436 issued December 28, 1999, in view of

Takasawa et al. (hereinafter Takasawa), UK Patent Application, GB 2 307 571 A, publication date May

28, 1997.

        In regard to independent claim 14, Motoyama teaches:

        - converting a format of a first source document (SGML) into a format of another similarly structured

document (HTML). Motoyama teaches mapping from SGML to HTML utilizing mapping tables of Appendices

A-D, said mapping utilizing various heuristics in order to perform said mapping (Motoyama Appendix A-D,

Abstract, column 3 lines 27-29, column 6 lines 30-32; compare with claim 14 *"A method of converting....the*

method comprising:").

        - Motoyama does not specifically teach identifying patterns common within documents. However,

Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample documents

(Takasawa page 9, near bottom). Takasawa parses documents, and compares various elements to elements and

attributes in said structure list (i.e. appearance frequency), resulting in a listed pattern of structured elements in

the documents, precipitating generation of a DTD based upon said list (Takasawa page 9 near bottom, to page

10 at top, also pages 11-12, and page 16 at bottom, Figures 8-11; compare with claim 14 *"identifying patterns*

common to the first and second source documents;", and *"using the identified common patterns"*). It would have

been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa's pattern

identification to Motoyama, providing Motoyama the benefit of simplifying the exchange of similar documents

for reuse, by taking into account common patterns in the mapping process (Takasawa page 1 at middle).

        - mapping elements and sub-elements from one source document to equivalent elements and sub-

elements in the second document, the mapping of SGML elements to HTML elements are used by Motoyama to

produce documents accordingly (Motoyama column 6 lines 1-10, Apendix B, D, Figures 3A- 3B; compare with

claim 14 *"map elements and sub-elements....in the second source document."*).

- Motoyama does not specifically teach mapping elements of one type in a first document, to another different type element in a second document. However, Takasawa teaches creating a single DTD subsequent to analyzing more then one input document. The resulting DTD is created based upon totalizing the logical structure information of each input document, said totalizing comprising structure information common to both documents, as well as unique information. Since document logical structures are analyzed, it is noted that the pattern of tag: "<opening date>" within Takasawa Figure 7, can be matched with the same tag in Figures 5 and 6, nevertheless, the position of said tag in the logical structure from Figure 7 is different then in Figures 5 and 6 (when rendered on a browser), therefore, can be interpreted as a different element type, due to its position (see Takasawa page 5 – middle to bottom paragraph, to page 6 – top paragraph, see also Figure 2) (compare with claim 14 *"at least one of the elements or sub-elements in the first source document....based upon the identified common patterns."*). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa to Motoyama, providing Motoyama the benefit of pattern matching to create final DTDs.

In regard to dependent claim 15, Motoyama teaches mappings within Appendices A-D, said appendices comprising various tag replacement (Motoyama column 29 line 45, to column 31 line 48; compare with claim 15).

In regard to dependent claim 16, Motoyama teaches transformation of an SGML document into an HTML document, said transformation incorporating analyzation of their respective DTDs, and utilizing the mappings of Appendices A-D (Motoyama Abstract, column 6 lines 1-4, 30-32, Appendices A-D, Figures 3A-3B; compare with claim 16).

In regard to dependent claim 17, Motoyama does not specifically teach creating a DTD if one does not exist in the first document. However, Takasawa teaches a DTD created from analyzation of structured information from a sample document (Takasawa page 4 at middle; compare with claim 17). It would have been

obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa's DTD creation to

Motoyama, providing Motoyama the flexibility of creating an initial DTD if needed.

In regard to dependent claim 18, claim 18 is rejected using the same rejection and rationale as set

forth by the Examiner in the current rejection of claim 14.

In regard to dependent claim 20, claim 20 is rejected using the same rejection and rationale as set

forth by the Examiner in the current rejection of claims 19.

In regard to dependent claim 21, claim 21 incorporates substantially similar subject matter as claimed

in claim 14, and in further view of the following, is rejected along the same rationale.

Motoyama teaches that processing systems are known in which a processor converts a markup language

document automatically into another format (Motoyama column 2 lines 42-45; compare with claim 21),

therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to automate

Motoyama's invention to benefit from the advantages that automation provides (i.e. freeing up human

resources).

In regard to independent claim 22, Motoyama teaches:

- converting a format of a first source document (SGML) into a format of another similarly structured

document (HTML). Motoyama teaches mapping from SGML to HTML utilizing mapping tables of Appendices

A-D, said mapping utilizing various heuristics in order to perform said mapping (Motoyama Appendix A-D,

Abstract, column 3 lines 27-29, column 6 lines 30-32; compare with claim 22 *"A method of converting....the*

method comprising:").

- Motoyama does not specifically teach identifying patterns common within documents. However,

Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample documents

(Takasawa page 9, near bottom). Takasawa parses documents, and compares various elements to elements and attributes in said structure list (i.e. appearance frequency), resulting in a listed pattern of structured elements in the documents, precipitating generation of a DTD based upon said list (Takasawa page 9 near bottom, to page 10 at top, also pages 11-12, and page 16 at bottom, Figures 8-11; compare with claim 22 *"identifying patterns common to the source document and the set of source documents;"*, and *"the common pattern"*). It would have been obvious to on eof ordinary skill in the art at the time of the invention to apply Takasawa's pattern identification to Motoyama, providing Motoyama the benefit of simplifying the exchange of similar documents for reuse, by taking into account common patterns in the mapping process (Takasawa page 1 at middle).

- mapping elements and sub-elements from one source document to equivalent elements and sub-elements in the second document, the mapping of SGML elements to HTML elements are used by Motoyama to produce documents accordingly (Motoyama column 6 lines 1-10, Apendix B, D, Figures 3A- 3B; compare with claim 22 *"mapping elements and sub-elements.....in the set of source documents."*, and *"in common pattern of the source document"*, and *"in common pattern of the set of source documents"*).

- Motoyama teaches mappings within Appendices A-D, said appendices comprising various tag replacement (Motoyama column 29 line 45, to column 31 line 48; compare with claim 22 *"replacing tag names"*).

- Motoyama does not specifically teach mapping elements of one type in a first document, to another different type element in a second document. However, Takasawa teaches creating a single DTD subsequent to analyzing more then one input document. The resulting DTD is created based upon totalizing the logical structure information of each input document, said totalizing comprising structure information common to both documents, as well as unique information. Since document logical structures are analyzed, it is noted that the pattern of tag: "<opening date>" within Takasawa Figure 7, can be matched with the same tag in Figures 5 and 6, nevertheless, the position of said tag in the logical structure from Figure 7 is different then in Figures 5 and 6 (when rendered on a browser), therefore, can be interpreted as a different element type, due to its position (see Takasawa page 5 – middle to bottom paragraph, to page 6 – top paragraph, see also Figure 2) (compare with

claim 22 *"at least one of the elements or sub-elements in the first source document....based upon the identified*

common patterns."). It would have been obvious to one of ordinary skill in the art at the time of the invention to

apply Takasawa to Motoyama, providing Motoyama the benefit of pattern matching to create final DTDs.

In regard to dependent claim 23, Motoyama teaches transformation of an SGML document into an

HTML document, said transformation incorporating analyzation of their respective DTDs, and utilizing the

mappings of Appendices A-D (Motoyama Abstract, column 6 lines 1-4, 30-32, Appendices A-D, Figures 3A-

3B; compare with claim 23).

In regard to dependent claim 24, Motoyama does not specifically teach creating a DTD if one does

not exist in the first document. However, Takasawa teaches a DTD created from analyzation of structured

information from a sample document (Takasawa page 4 at middle; compare with claim 24). It would have been

obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa's DTD creation to

Motoyama, providing Motoyama the flexibility of creating an initial DTD if needed.

In regard to independent claim 25, Motoyama teaches:

- converting a format of a first source document (SGML) into a format of another similarly structured

document (HTML). Motoyama teaches mapping from SGML to HTML utilizing mapping tables of Appendices

A-D, said mapping utilizing various heuristics in order to perform said mapping (Motoyama Appendix A-D,

Abstract, column 3 lines 27-29, column 6 lines 30-32; compare with claim 25 *"A computer program....causing a*

computer system to:").

- Motoyama does not specifically teach identifying patterns common within documents. However,

Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample documents

(Takasawa page 9, near bottom). Takasawa parses documents, and compares various elements to elements and

attributes in said structure list (i.e. appearance frequency), resulting in a listed pattern of structured elements in

the documents, precipitating generation of a DTD based upon said list (Takasawa page 9 near bottom, to page

10 at top, also pages 11-12, and page 16 at bottom, Figures 8-11; compare with claim 25 *"identify patterns*

common to the first and second source documents;", and *"using the identified common patterns"*). It would have

been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa's pattern

identification to Motoyama, providing Motoyama the benefit of simplifying the exchange of similar documents

for reuse, by taking into account common patterns in the mapping process (Takasawa page 1 at middle).

     - mapping elements and sub-elements from one source document to equivalent elements and sub-

elements in the second document, the mapping of SGML elements to HTML elements are used by Motoyama to

produce documents accordingly (Motoyama column 6 lines 1-10, Apendix B, D, Figures 3A- 3B; compare with

claim 25 *"map elements and sub-elements.....of the second source document."*).

     - Motoyama does not specifically teach mapping elements of one type in a first document, to another

different type element in a second document. However, Takasawa teaches creating a single DTD subsequent to

analyzing more then one input document. The resulting DTD is created based upon totalizing the logical

structure information of each input document, said totalizing comprising structure information common to both

documents, as well as unique information. Since document logical structures are analyzed, it is noted that the

pattern of tag: "<opening date>" within Takasawa Figure 7, can be matched with the same tag in Figures 5 and

6, nevertheless, the position of said tag in the logical structure from Figure 7 is different then in Figures 5 and 6

(when rendered on a browser), therefore, can be interpreted as a different element type, due to its position (see

Takasawa page 5 – middle to bottom paragraph, to page 6 – top paragraph, see also Figure 2) (compare with

claim 25 *"at least one of the elements or sub-elements in the first source document....based upon the identified*

common patterns."). It would have been obvious to one of ordinary skill in the art at the time of the invention to

apply Takasawa to Motoyama, providing Motoyama the benefit of pattern matching to create final DTDs.

In regard to dependent claim 26, Motoyama teaches mappings within Appendices A-D, said appendices comprising various tag replacement (Motoyama column 29 line 45, to column 31 line 48; compare with claim 26).

In regard to dependent claim 27, Motoyama teaches transformation of an SGML document into an HTML document, said transformation incorporating analyzation of their respective DTDs, and utilizing the mappings of Appendices A-D (Motoyama Abstract, column 6 lines 1-4, 30-32, Appendices A-D, Figures 3A-3B; compare with claim 27).

In regard to independent claim 28, Motoyama teaches:

- a storage device (Motoyama Figure 19 item 1236; compare with claim 28 "*a storage device*").

- converting a format of a first source document (SGML) into a format of another similarly structured document (HTML). Motoyama teaches mapping from SGML to HTML utilizing mapping tables of Appendices A-D, said mapping utilizing various heuristics in order to perform said mapping (Motoyama Appendix A-D, Abstract, column 3 lines 27-29, column 6 lines 30-32; compare with claim 28 "*A computer system comprising*", and "*for storing a source document....the set of source documents;*").

- Motoyama does not specifically teach identifying patterns common within documents. However, Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample documents (Takasawa page 9, near bottom). Takasawa parses documents, and compares various elements to elements and attributes in said structure list (i.e. appearance frequency), resulting in a listed pattern of structured elements in the documents, precipitating generation of a DTD based upon said list (Takasawa page 9 near bottom, to page 10 at top, also pages 11-12, and page 16 at bottom, Figures 8-11; compare with claim 28 "*identify patterns common to the first and second source documents;*"). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa's pattern identification to Motoyama, providing Motoyama

the benefit of simplifying the exchange of similar documents for reuse, by taking into account common patterns

in the mapping process (Takasawa page 1, at middle).

- mapping elements and sub-elements from one source document to equivalent elements and sub-

elements in the second document, the mapping of SGML elements to HTML elements are used by Motoyama to

produce documents accordingly (Motoyama column 6 lines 1-10, Appendix B, D, Figures 3A- 3B; compare

with claim 28 *"map elements and sub-elements....of the set of source documents."*).

- Motoyama does not specifically teach mapping elements of one type in a first document, to another

different type element in a second document. However, Takasawa teaches creating a single DTD subsequent to

analyzing more then one input document. The resulting DTD is created based upon totalizing the logical

structure information of each input document, said totalizing comprising structure information common to both

documents, as well as unique information. Since document logical structures are analyzed, it is noted that the

pattern of tag: "<opening date>" within Takasawa Figure 7, can be matched with the same tag in Figures 5 and

6, nevertheless, the position of said tag in the logical structure from Figure 7 is different then in Figures 5 and 6

(when rendered on a browser), therefore, can be interpreted as a different element type, due to its position (see

Takasawa page 5 – middle to bottom paragraph, to page 6 – top paragraph, see also Figure 2) (compare with

claim 28 *"at least one of the elements or sub-elements in the first source document....based upon the identified

common patterns."*). It would have been obvious to one of ordinary skill in the art at the time of the invention to

apply Takasawa to Motoyama, providing Motoyama the benefit of pattern matching to create final DTDs.

In regard to dependent claims 29-30, 32-33, claims 29-30, 32-33 reflect the computer program

product comprising computer readable instructions used for performing the methods as claimed in claims 17-18,

20-21, respectively, and are rejected along the same rationale.

In regard to claims 34-36, claims 34-36 reflect the computer program product comprising computer readable instructions used for performing the methods as claimed in claims 22-24, respectively, and are rejected along the same rationale.

In regard to dependent claims 37-40, Motoyama does not specifically teach identification without user intervention. However, Takasawa teaches automatically generating a DTD subsequent to computer analysis of input documents (Takasawa page 8 – bottom paragraph). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa to Motoyama, providing Motoyama the benefit of automation to free up manual human resources.

Response to Arguments

9.   Applicant's arguments filed 6/13/2003 have been fully and carefully considered but they are not persuasive.

Applicant argues on pages 10-13 of the amendment that Motoyama does not teach defining a mapping based on identified patterns common to two documents. The examiner respectively notes that Motoyama teaches mapping elements and sub-elements from one source document to equivalent elements and sub-elements in the second document (i.e. mapping of SGML elements to HTML elements). Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample documents. Takasawa parses sample documents, and compares various elements to elements in said structure list (i.e. appearance frequency of common tags is a pattern), resulting in a listed pattern of structured elements in the documents. It is noted that a single final DTD can be created based upon analysis of a plurality of input documents.

Conclusion

10.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to William Bashore whose telephone number is (703) 308-5807. The examiner can

normally be reached on Monday through Friday from 11:30 AM to 8:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Joseph Feild, can be reached on (703) 305-9792.

Any inquiry of a general nature or relating to the status of this application should be directed to the

Group receptionist whose telephone number is (703) 305-3900.

11.   **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

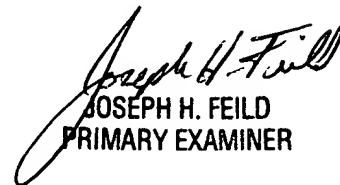(703) 746-7239 (for formal communications intended for entry)
or:
(703) 746-7240 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")
or:
(703) 746-7238 (for after-final communications)

**Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Fourth Floor (Receptionist).**

William L. Bashore   JOSEPH H. FEILD
August 23, 2003   PRIMARY EXAMINER